REMARKS

This Amendment is filed in response to the Final Office Action mailed Aug. 25, 2010 in connection with a Request for Continued Examination. The Applicant respectfully requests reconsideration. All objections and rejections are respectfully traversed.

Claims 1-32 are now pending in the application.

Claims 1-29 have been amended.

New claims 30-32 has have been added.

Interview Summary

On Nov. 15, 2010 the Applicant's attorney conducted a telephone interview with the Examiner. The Applicant thanks the Examiner for his time. During the interview, proposed amendments to claim 1 were discussed. Specifically, it was discuss to amend claim 1 to further specify that "***the GVRP PDU message generator is configured to load each encoded value into a separate field within a single attribute structure of a single GVRP PDU message, wherein the encoded values computed for all of the VLANs defined within the computer network are loaded within the single attribute structure*** ..." Further, the Applicant's attorney directed the Examiner's attention to Fig. 4 of the Application, and such figure was discussed. The Examiner indicated that he believed such amendment would overcome the cited prior art.

Response to Examiner's Response to Arguments

At pages 2-3 of the Final Office Action, the Examiner comments that "[s]ince claim 1 does not distinguish how the new encoded value is placed in the PDU or whether the new encoded value replaces the standard two-octet field of a single VLAN attribute, the Examiner asserts that any payload compression in combination with the 802.1Q and 802.1D standard reads on the limitation." The Applicant has amended the claims to specify that the encoded values are loaded into fields **within a single attribute structure** of a PDU message, wherein the **encoded values computed for all of the VLANs** defined within the computer network are **loaded within a single attribute structure** of the PDU

message. As explained in more detail below, prior techniques have required a **separate attribute structure** including a two octet (i.e. two-byte) attribute value field **for each active VLAN.** *See* 802.1Q and 802.1D.

Claim Rejections - 35 U.S.C. §103

At pages 3-12 the Final Office Action, claims 1-4, 14, 15, 19 and 22-29 were rejected under 35 U.S.C. §103(a) over IEEE Standards for Local and Metropolitan Area Networks: Virtual Bridge Local Area Networks, IEEE Std. 802.1Q, 1998 (hereinafter "802.1Q") in view of IEEE Standard Part 3: Media Access Control (MAC) Bridges, IEEE Std. 801.1D, 1998 (hereinafter "802.1D"), in further view of Schmid et al., U.S. Publication No. 2005/0047570 (hereinafter "Schmid") and Huang, U.S. Patent No. 4,281,391 (hereinafter "Huang").

The Applicant's amended claim 1, representative in part of the other rejected claims, recites (emphasis added):

> 1. An intermediate network device having a plurality of ports for sending and receiving network messages to and from entities of a computer network at least some of which are segregated into a plurality of virtual local area network (VLANs) defined within the computer network, the intermediate network device comprising:
>
> a compact-Generic Application Registration Protocol (GARP) VLAN Registration Protocol (GVRP) application component associated with a selected port, the compact-GVRP application component having:
>
> a GARP Information Declaration (GID) component configured to maintain VLAN registration state for the selected port in response to receiving attribute events for the VLANs;
>
> a compact-GVRP encoder/decoder unit; and
>
> a GVRP protocol data unit (PDU) message generator, wherein
>
> the compact-GVRP encoder/decoder unit is configured to ***compute encoded values,*** in accordance with a number base conversion encoding algorithm ***that encodes a plurality of attribute events that are each associated with a different VLAN of a given set of VLANs into each encoded value***, and
>
> the GVRP PDU message generator is configured to ***load each encoded value into a separate field within a single attribute structure of a single GVRP PDU message, wherein the encoded values computed for***

all of the VLANs defined within the computer network are loaded within the single attribute structure of the single GVRP PDU message for transmission from the selected port.

802.1Q describes a conventional form of GVRP where "GVRP allows both end stations and Bridges in a Bridged LAN to issue and revoke declarations relating to memberships of VLANs" *See* 802.1Q, Section 11.2.1. In order to exchange VLAN membership information, bridges and end station exchange GVRP PDU messages. In conventional GVRP PDU messages, a multiple-byte attribute structure is provided for each active VLAN to express the state that VLAN. **Specifically, for each active VLAN a separate multiple-byte attribute structure including a two octet (i.e., two byte) "Attribute Value" field is used**. *See* 802.1Q, Section 11.2.3.1.3.

802.1D discusses the conventional format of a GARP Protocol Data Unit (PDU). At Section 12.11.1.2, 802.1D states that a conventional GARP PDU includes "[a]n Attribute List consists of one or more *Attributes*…." *See also* 802.1D Fig. 12-6. 802.1D goes on to discuss that "[s]uccessive messages are packed into the GARP PDU, and within each Message, successive **Attributes are packed into each Message, until the end of the PDU is encountered** or there is no more attributes to pack at that time." *See* 802.1D Section 12.11.3.1. "The PDU has exactly enough room for the first N Attributes that require to be transmitted at the time to be packed. In this case, the PDU is transmitted, and the next N Attributes are encoded in a subsequent PDU." *See* 802.1D Section 12.11.3.1.

Schmid discusses "automatic compression an decompression of the payload portion of [a] call" over a communications channel." *See* Schmid paragraph 0023, lines 10-13.

Huang describes that the "process of dividing by a number; subtracting the remainder from the original equation; and dividing this by the same number to form a new equation is known as Euclid's base conversion algorithm. A specialized version of this is commonly used to convert from decimal to binary." *See* Huang col. 34, lines 59-63.

The Applicant respectfully urges that 802.1Q, 802.1D, Schmid and Huang do not suggest the Applicant's claimed "***compute encoded values … that encode[] a plurality of attribute events that are each associated with a different VLAN of a given set of VLANs into each encoded value***" and "***load each encoded value into a separate field within a single attribute structure of a single GVRP PDU message, wherein the encoded values computed for all of the VLANs defined within the computer network are loaded within the single attribute structure of the single GVRP PDU message for transmission from the selected port***."

While the Applicant computes a series of encoded values that each represent a plurality of attribute events for different VLANs, and loads each encoded value into a separate field **within a single attribute structure** of a single GVRP PDU message, such that the **single attribute structure** of the single GVRP PDU message now stores information for all of the VLANs defined within the computer, 802.1Q and 802.1D require a **separate attribute structure** including a two octet (i.e. two-byte) attribute value field **for each active VLAN,** Schmid merely discusses compressing a payload portion of a call, and Huang merely discusses use of "Euclid's base conversion algorithm" to convert between bases. None of the references suggest changing the information contained in fields within a GVRP PDU message, by creating encoded values that each represent a plurality of attribute events for different VLANs (rather than representing an attribute event for just one VLAN) and then loading each encoded value into a separate field **within a single attribute structure of** a GVRP PDU, such that each field within **the single attribute structure** GVRP PDU now stores information for a plurality of different VLANs (rather than the attribute structure just storing information for just one VLAN).

Accordingly, the Applicant respectfully urges that the combination of 802.1Q, 802.1D, Schmid and Huang, is legally insufficient to make obvious the present claims under 35 U.S.C. §103(a) at least due to the claimed "***compute encoded values … that encode[] a plurality of attribute events that are each associated with a different VLAN of a given set of VLANs into each encoded value***" and "***load each encoded value into a separate field within a single attribute structure of a single GVRP PDU message,***

wherein the encoded values computed for all of the VLANs defined within the computer network are loaded within the single attribute structure of the single GVRP PDU message for transmission from the selected port."

At pages 12-13 of the Final Office Action, claim 5 was rejected under 35 U.S.C. §103(a) over 802.1Q in view of 802.1D, in further view of Schmid, in still further view of Huang, in still further view of Churchyard et al., U.S. Patent No. 7,089,302 (hereinafter "Churchyard").

At pages 13-17 of the Final Office Action, claims 6-8 and 10 were rejected under 35 U.S.C. §103(a) over 802.1Q in view of 802.1D, in further view of Schmid, in still further view of Huang, in still further view of Churchyard et al., in still further view of Rodeheffer et al., U.S. Publication No. 2005/0036500 (hereinafter "Rodeheffer").

At pages 17-18 of the Final Office Action, claims 9 and 18 were rejected under 35 U.S.C. §103(a) over 802.1Q in view of 802.1D, in further view of Schmid, in still further view of Huang, in still further view of Churchyard et al., in still further view of Rodeheffer, in still further view of Liu et al., U.S. Publication No. 2004/0061773 (hereinafter "Liu") and Uchida et al., U.S. Publication No. 2004/0076130 (hereinafter "Uchida").

At pages 18-19 of the Final Office Action, claims 11 and 12 were rejected under 35 U.S.C. §103(a) over 802.1Q in view of 802.1D, in further view of Schmid, in still further view of Huang, in still further view of Churchyard et al., in still further view of Rodeheffer, in still further view of Liu.

At pages 19-21 of the Final Office Action, claim 13 was rejected under 35 U.S.C. §103(a) over 802.1Q in view of 802.1D, in further view of Schmid, in still further view of Huang, in still further view of Davis et al, U.S. Publication Number 2003/0043806 (hereinafter "Davis") and "Charachorloo et al., U.S. Publication Number 2002/0087806 (hereinafter "Charachorloo").

At pages 21-24 of the Final Office Action, claims 16 and 17 were rejected under 35 U.S.C. §103(a) over 802.1Q in view of 802.1D, in further view of Schmid, in still further view of Huang, in still further view of Churchyard and Rodeheffer.

At pages 23-24 of the Final Office Action, claims 20 and 21 were rejected under 35 U.S.C. §103(a) over 802.1Q in view of 802.1D, in further view of Schmid, in still further view of Huang, in further view of Liu

The Applicant notes that claims 5-13 and 16-21 are dependent claims that depend from independent claims believed to be allowable for at least the reasons discussed above. Claims 5-13 and 16-21 are believed to be allowable due to their dependency, as well as for other separate reasons.

In the event that the Examiner deems a further telephone conversation desirable in disposition of this case, the Examiner is encouraged to call the undersigned attorney at (617) 951-2500.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,

/James A. Blanchette/

James A. Blanchette
Reg. No. 51,477
CESARI AND MCKENNA, LLP
88 BLACK FALCON AVENUE
BOSTON, MA 02210
Telephone: (617) 951-2500
Facsimile: (617) 951-3927